

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-3 (canceled).

4 (currently amended). A polynucleotide comprising SEQ ID NO: 2
or a ~~fragment~~ sequence having at least ~~90%~~ 80% sequence identity to a
~~fragment of~~ SEQ ID NO: 2,

wherein said polynucleotide in the absence of inverted terminal repeat
sequences from human adeno-associated virus specifically induces expression in
cardiac cells *in vivo* of a gene which is operably linked to said polynucleotide.

5 (previously presented). An expression cassette comprising a sequence
encoding a protein or an RNA of therapeutic interest operably linked to the
polynucleotide according to claim 4.

6 (canceled).

7 (previously presented). The expression cassette according to claim 5, wherein
the protein or RNA of therapeutic interest increases a rate of cardiac cell division,
reduces or suppresses an immune response, induces angiogenesis, changes muscle
contractility, reduces cardiac hypertrophy, reduces cardiac insufficiency, or reduces
myocarditis.

8. (canceled).

9 (previously presented). The expression cassette according to claim 5, wherein the protein or RNA of therapeutic interest is a vascular endothelial growth factor, a fibroblast growth factor, an angiopoietin, or a cytokine.

10 (canceled).

11 (previously presented). The expression cassette according to claim 5, wherein the protein or RNA of therapeutic interest is an activating or an inhibiting transcription factor.

12-13 (canceled).

14 (previously presented). The expression cassette according to claim 5, wherein the protein of therapeutic interest is an immunosuppressive protein.

15 (previously presented). The expression cassette according to claim 14, wherein the immunosuppressive protein is interleukin-10, interleukin-2, or interleukin-8.

16 (canceled).

17 (previously presented). The expression cassette according to claim 5, wherein the RNA of therapeutic interest is an antisense RNA or a ribozyme.

18 (canceled).

19 (previously presented). The expression cassette according to claim 5, wherein the protein of therapeutic interest is nitric oxide synthetase, superoxide dismutase, or catalase.

20 (canceled).

21 (previously presented). A vector comprising the polynucleotide according to claim 4.

22 (canceled).

23 (previously presented). A vector comprising the expression cassette according to claim 5.

24 (canceled).

25 (previously presented). The vector according to claim 21, further comprising an origin of replication which is active in cardiac cells.

26 (canceled).

27 (previously presented). The vector according to claim 21, which is a plasmid or a cosmid.

28 (canceled).

29 (previously presented). The vector according to claim 21, which is or is derived from an adenovirus, a retrovirus, a herpesvirus, or an adeno-associated virus.

30 (canceled).

31 (previously presented). A composition comprising a therapeutically-effective amount of the polynucleotide according to claim 4 and a pharmaceutically-acceptable carrier.

32 (canceled).

33 (previously presented). A composition comprising a therapeutically-effective amount of the vector according to claim 21 and a pharmaceutically-acceptable carrier.

34 (withdrawn). A transgenic nonhuman animal comprising a reporter gene operably linked to the polynucleotide according to claim 1.

35 (withdrawn). A transgenic nonhuman animal comprising a reporter gene operably linked to the polynucleotide according to claim 4.

36 (withdrawn). A method for expressing a protein or an RNA of therapeutic interest in cardiac cells *in vivo*, comprising

- preparing a vector according to claim 22, and
- introducing said vector into cardiac cells *in vivo* so that said protein or RNA of therapeutic interest is expressed.

37 (withdrawn). A method for expressing a protein or an RNA of therapeutic interest in cardiac cells *in vivo*, comprising

- preparing a vector according to claim 23, and
- introducing said vector into cardiac cells *in vivo* so that said protein or RNA of therapeutic interest is expressed.

38 (canceled).

39 (previously presented). The vector according to claim 21, which is any DNA not encapsidated by viral proteins.

40 (previously presented). A polynucleotide comprising SEQ ID NO: 1 or a sequence having at least 93% identity to SEQ ID NO: 1, wherein said polynucleotide in the absence of inverted terminal repeat sequences from human adeno-associated virus specifically induces expression in cardiac cells *in vivo* of a gene which is operably linked to said polynucleotide.

41 (previously presented). An expression cassette comprising a sequence encoding a protein or an RNA of therapeutic interest operably linked to the polynucleotide according to claim 40.

42 (previously presented). The expression cassette according to claim 41, wherein the protein or RNA of therapeutic interest increases a rate of cardiac cell division, reduces or suppresses an immune response, induces angiogenesis, changes muscle contractility, reduces cardiac hypertrophy, reduces cardiac insufficiency, or reduces myocarditis.

43 (previously presented). The expression cassette according to claim 41, wherein the protein or RNA of therapeutic interest is a vascular endothelial growth factor, a fibroblast growth factor, an angiopoietin, or a cytokine.

44 (previously presented). The expression cassette according to claim 41, wherein the protein or RNA of therapeutic interest is an activating or an inhibiting transcription factor.

45 (previously presented). The expression cassette according to claim 41, wherein the protein of therapeutic interest is an immunosuppressive protein.

46 (previously presented). The expression cassette according to claim 45, wherein the immunosuppressive protein is interleukin-10, interleukin-2, or interleukin-8.

47 (previously presented). The expression cassette according to claim 41, wherein the RNA of therapeutic interest is an antisense RNA or a ribozyme.

48 (previously presented). The expression cassette according to claim 41, wherein the protein of therapeutic interest is nitric oxide synthetase, superoxide dismutase, or catalase.

49 (previously presented). A vector comprising the polynucleotide according to claim 40.

50 (previously presented). A vector comprising the expression cassette according to claim 41.

51 (previously presented). The vector according to claim 49, further comprising an origin of replication which is active in cardiac cells.

52 (previously presented). The vector according to claim 49, which is a plasmid or a cosmid.

53 (previously presented). The vector according to claim 49, which is or is derived from an adenovirus, a retrovirus, a herpesvirus, or an adeno-associated virus.

54 (previously presented). A composition comprising a therapeutically-effective amount of the polynucleotide according to claim 40 and a pharmaceutically-acceptable carrier.

55 (previously presented). A composition comprising a therapeutically-effective amount of the vector according to claim 49 and a pharmaceutically-acceptable carrier.

56 (previously presented). The vector according to claim 49, which is any DNA not encapsidated by viral proteins.